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ABSTRACT

In an experiment designed to explore the immediate disconfirming effects of strong and mild incongruent messages and the impact of certain contextual constraints on disconfirming effects, 192 male undergraduates evaluated videotaped examples of strong and mild sarcasm and joking and the complementary congruent forms of straightforward positive and negative remarks for confusion and discomfort, in eight contexts. Booklets containing descriptions of a situation and scales for evaluating the comfort and clarity of videotaped messages were distributed to the subjects. Statistically significant context effects were obtained only for the strong joking and mild sarcasm messages. Mild incongruent messages (mild joking and mild sarcasm) were least clear. Strong joking, mild positive, and mild negative messages were more clear than the mild incongruent messages, but less clear than strong positive, strong negative, and strong sarcasm. It can be concluded that the context did not have a meaningful influence on subjects' responses to multichannel messages. (Eight tables are included.) (JF)

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DISCONFIRMING (DOUBLE BIND) EFFECTS OF INCONGRUENT MULTI-CHANNEL MESSAGES

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DISCONFIRMING (DOUBLE BIND) EFFECTS OF INCONGRUENT MULTI-CHANNEL MESSAGES

It is widely held that certain patterns of communication are instrumental in the creation and exacerbation of recipient psychopathology (e.g., Ruesch, 1951, 50-93; Sullivan, 1953, xii; Rogers, 1957, 96; Buber, 1958, 101-02; Laing, 1961, 82-91; Watzlawick, Beavin & Jackson, 1967, 84; Wender, 1967; Giffin, 1970; Sieberg, 1973; Rossiter & Pearce, 1975, 240-42). Generally, communication by which the recipient is bewildered, ignored, belittled, or otherwise disconfirmed is considered pathogenic; and, presumably, exposure to vague, ambiguous, irrelevant, or, in particular, incongruent messages from significant others may result in recipient illness as severe as schizophrenia (cf. Woodward & Goldstein, 1977).

Implicit in the proposition that certain communication patterns are pathogenic has been a developmental model of the interaction between communication and mental illness. The model appears to have two stages: (1) In response to each pathogenic message, recipients immediately experience perceptual and interpretive difficulties and the associated disconfirming effects of, first, confusion, and then discomfort (Watzlawick, 1976, 45). The immediate experiential effects of incongruent multi-channel messages such as joking (negative verbal, positive nonverbal, positive overall affect) and sarcasm (positive verbal, negative nonverbal, negative overall affect), for example, are thought to be confusion and discomfort (Sluzki, Beavin, Tarnopolsky & Veron, 1967; Wender, 1967; Beakel & Mehrabian, 1969; Lachenmeyer, 1969, 31; Sieberg, 1969; Giffin, 1970; Argyle, Salter, Nicholson, Williams & Burgess, 1970; Argyle, Al-

kema & Gilmour, 1971; Sieberg & Larson, 1971; Child, 1973, 136; Goldberg & Larson, 1975, 105). And (2), over the long term, repeated experience with disconfirming messages and the associated effects of confusion and discomfort generates serious and perhaps permanent mental disorder (Woodward & Goldstein, 1977).

Related to the general proposition that incongruent, vague, ambiguous, or irrelevant messages are pathogenic is another popular view, that contextual constraints may modify the immediate effects of pathogenic messages. One prominent position, advanced by Bateson, Haley, Jackson & Weakland (1956), suggests that in those "double bind" situations in which (1) the communicator is important to the message recipient, (2) the recipient is unable to clarify the meaning of the message, and (3) the recipient is expected to respond appropriately, the disconfirming effects of incongruent and other pathogenic messages are intensified.

Considering the popularity of the propositions that some communication styles are pathogenic and that the effects of such styles are intensified by certain contextual conditions, it is a startling fact that, actually, the results of numerous investigations are, in fact, inconclusive and simply do not justify the complacent, widespread acceptance that the propositions enjoy. Various problems (discussed in Schuham, 1967, and Woodward & Goldstein, 1977) characterize the research and render most results questionable. As will be evident from our critique later in this paper, even the apparently well-established relationship between incongruent multichannel messages and recipient confusion and discomfort is, in fact, quite tenuous; and a number of different and often incompatible conclusions as to exactly which incongruent messages are pathogenic can be drawn from the literature. Strangely, even the effects of the "double bind" conditions

on recipient responses have not been experimentally investigated.

In light of the many problems with past research and considering the importance of the proposed relationship between communication patterns and psychopathology, the research reported in this paper was undertaken. Focusing specifically on the short-term stage of the developmental model and on incongruent messages, this study (1) investigated the proposition that incongruent multi-channel messages (sarcasm and joking) generate the immediate disconfirming ("double bind") effects of confusion and discomfort, and (2) explored the related suggestion that disconfirming effects are accentuated by specific elements of the interpersonal context. While failure to find short-term effects associated with incongruent messages would not necessarily disconfirm the general proposition that certain messages are pathogenic, it would certainly cast doubt upon it. Further, should the expected disconfirming effects be found not with the predicted messages but with others instead, the communication patterns --> mental illness relationship would have to be reexamined seriously. This strategy has the obvious further virtue of allowing experimental exposure of subjects to kinds of messages without posing the ethical problems associated with repeatedly exposing subjects to treatments hypothesized to be detrimental, and so it was adopted for this study.

In reporting this study, we first develop four "alternative" "message hypotheses" (developed from four positions derived from two major theoretical perspectives) which collectively predict that immediate disconfirming effects vary with the kind and degree of message incongruency, second, discuss a "contextual hypothesis" based on the "double bind theory

of schizophrenia" which predicts that three specific contextual factors increase the disconfirming effects of incongruent messages; and, finally, report an experiment in which all five hypotheses were tested.

MESSAGE PREDICTIONS

The notion that incongruent multi-channel messages produce disconfirming effects has been derived from the complementary perspectives of Symbolic Interactionism and the "hierarchical message structure" model of communication (LaRossa, 1974) advanced primarily by Ruesch and Bateson (1951), Ruesch (1953), and Watzlawick et al. (1967).

Symbolic Interactionism

From the viewpoint of Symbolic Interactionism, a significant aspect of self-concept emerges in and is generated by symbol exchange (e.g., Mead, 1925; Pfuetze, 1961, 302; Burke, 1965; see also Gordon & Gergen, 1968). In communication, by role-taking and treating the self as object (using empathic, reflexive, and symbolic capacities), opinions of others about the self are interpreted and identity is defined (Hulett, 1966; Kelley, Osborne & Hendrick, 1974); and the shared attitudes and ways of behaving implicitly contained in common symbols are internalized (Burke, 1935, 175-76; Duncan, 1968, 21; Meltzer, 1967). In even the most trivial of interactions, then, the self is vulnerable, for in every interaction, the self is confronted with messages that describe

and evaluate its nature and worth (Sieburg, 1973). From this perspective two conflicting predictions can be made about what types of incongruent multi-channel messages are likely to be most disconfirming.

(1) Incongruent Symbolic Cues Prediction

In studies of symbols and symbolic clusters associated with disconfirmation within the general framework of Symbolic Interactionism, Sieburg (1969) and Sieburg and Larson (1971) reported that inappropriate, negative, and ambiguous messages, particularly messages composed of incongruent verbal and nonverbal symbolic cues, were felt to be disconfirming. An apparent implication of their findings is that, assuming appropriateness, multi-channel messages composed of strongly contrasting verbal and nonverbal cues and rated as strongly negative in overall affective value (i.e., strong sarcasms) should be more disconfirming than less strongly negative messages or positive incongruent messages. That is,

H_1: Strong sarcasm should be especially disconfirming and should, at the very least and with minimal exposure, generate more immediate, precursory perceptual and interpretive difficulties (such as confusion and discomfort) generally associated with disconfirmation, than other multi-channel messages.

(2) Message Forms Prediction

A second and quite different prediction can be drawn from Rummel's (1975) analysis of sarcastic and joking message forms. Rummel suggested that incongruent multi-channel messages can be viewed as instances ("actualizations") of symbolically significant abstract patterns ("message forms") in which the form dominates the message, and

which are culturally recognized as sarcasm and joking (pp. 1, 4-17). She argued that stimuli composing multi-channel configurations may vary in intensity, such that messages, at the component level, vary in the degree of incongruency among channels, and at the whole message level, vary in blatancy (obviousness) of the symbolic (sarcastic or joking) form (pp. 41-42). Following this line of reasoning, the weaker the incongruency among channels, the more subtle or equivocal the overall pattern, the greater the difficulty in determining the global affective value of the message; and thus, if lack of clarity (ambiguity) is related to disconfirmation:

H_2: mild sarcasm and mild joking (subtle enough to permit at least two interpretations, i.e., as either a straightforward or ironic remark) should create more disconfirming effects (confusion and discomfort) than other multi-channel messages.

Hierarchical Message Structure Model

From the "hierarchical message structure" communication model, as from Symbolic Interactionism, it can be concluded that in every interaction, the self is subject to disconfirmation. All interactive behavior has message value (Watzlawick et al., 1967, 48-51), all communication ultimately is about interactant relationships (LaRossa, 1974), and every message implicitly requests validation of the self (Satir, 1967; Giffin, 1970; Rossiter & Pearce, 1975, 241).

The model specifies that: (1) Every message is composed of at least two "sorts of meaning"--a report and a command (Bateson, 1951; LaRossa, 1974). The report aspect consists of information (data, content); and command aspect consists of information about the report

(Watzlawick et al., 1967, 51-54; Bateson, 1972). (2) These aspects are nested in a hierarchical structure in which the command is on a higher logical (Bateson, 1972; LaRossa, 1974) or pragmatic (Watzlawick et al., 1967, 54fn) level than the report; i.e., the command aspect is a meta-message that frames the report and indicates how it is to be interpreted (Bateson, 1972; cf. Schuham, 1967). A meta-message also gives information about the psychological conditions of the communicators, indicates how they see themselves and others and their relationships with them, and expresses intentions and expectations about their actions (Rossiter & Pearce, 1975, 236-37). Hence, disconfirmation is usually a function of meta-communication (Rossiter & Pearce, 1975, 241). (3) Meta-messages are often implicit; implicit meta-messages are nonverbal (LaRossa, 1974; see also Bateson, Jackson, Haley & Weakland, 1956). Generally, then, in multi-channel messages, the verbal component corresponds to the report, and the nonverbal components correspond to the command (Giffin, 1970). Since the command dominates the report, disconfirmation is usually accomplished nonverbally. From this orientation, two other predictions about the disconfirming effects of specific incongruent messages can be derived.

(1) The Double Bind Prediction

In contrast to the incongruent symbolic cues and message forms predictions, the hierarchical message structure model implies that, due to the dominance of the command (nonverbal) over the report (verbal), incongruent multi-channel messages should be resolvable (see LaRossa, 1974) and thus need not be especially discomforting and confusing (assuming that the report and command aspects are internally clear and consistent).

Bateson et al. (1956), however, have suggested that, when enforced by punishments or signals threatening survival, incongruent messages composed of a primary negative injunction and a secondary injunction conflicting with the first at a more abstract level may be confusing and discomforting. Specifically, in the context of an intense relationship with one or more significant others, in which the recipient ("victim") feels that he cannot ask for clarification of the incongruent message but must remain in the situation and respond appropriately, repeated exposure to contradictory messages eventually may lead to severe psychopathology, such as schizophrenia.

Apparently, in the Bateson et al. view, the hierarchical relationship between the command and report aspects of a message may be violated by the threats or punishments, which "force" the recipient to obey both injunctions (i.e., to act in contradictory ways) to avoid penalty. In effect, the threats or punishments are equivalent to an additional message which asserts that both injunctions are of equal status and are simultaneously true. Thus, the discontinuity between the negative report and the positive command is breached, a kind of paradox is created (see Watzlawick et al., 1967, 211-19), and logical resolution of the incongruent message is impossible. As a result, the recipient is in a "double bind."

Generally, punishments or threats of punishment have been accepted as integral elements in the double bind--but important for intensifying the interactant relationship or the recipient's anxiety, rather than for the creation of paradox (e.g., Sluzki et al., 1967; Schuham, 1967; Smith, 1972). This interpretation apparently resulted from the failure

of Bateson et al. to mention specifically threats or punishments in many explanatory passages and examples. In fact, Bateson et al. seemed to imply that threats or punishments may be latent or even absent. Since they also indicated that the secondary injunction may be communicated nonverbally, may be an evaluative expression instead of an overt exhortation, and may be implicit instead of explicit, it seems that, although there is no violation of logical levels, incongruent multi-channel messages in which the primary injunction (report, verbal) is negative and the secondary injunction (command, nonverbal) is positive, i.e., joking, legitimately meet the definitional requirements of a double bind. A natural extension of this viewpoint is that the more discrepant the injunctions (or evaluative expressions), the more the discomfort and confusion; hence the third prediction:

H_3: strong joking should induce more disconfirming, or double bind, effects (e.g., confusion, discomfort) than other multi-channel messages.

(2) Expanded Double Bind and Anomalous Interpretation Prediction

The vagueness and ambiguity of the Bateson et al. description of the double bind has been widely appreciated, and, as Schuham (1967) pointed out, the definition has been subsequently overexpanded. Sluzki et al. (1967) expanded the definition to include positive primary injunctions. Hence, an incongruent multi-channel message in which the verbal is positive and the nonverbal is negative, i.e., sarcasm, qualifies as a double bind message, along with joking. The view that both incongruent multi-channel message forms are double binding

is now widely accepted (e.g., Mehrabian & Wiener, 1967; Mehrabian & Ferris, 1967; Beakel & Mehrabian, 1969; Argyle et al., 1970; Argyle et al. 1971; Gartner, 1972; Child, 1973, 136; Ginsberg, 1974; Erickson & Hyerstay, 1974; Leathers, 1976, 237).

Without depending specifically on the double bind notion and in arguments remarkably insensitive to logical anomaly, others have accepted both the hierarchical message structure model (with its specification that the command defines the report and the interactant relationship) and the proposition that all incongruent multi-channel messages are psychologically disruptive, without requiring any violation of the hierarchical relationship between message levels (e.g., Satir, 1975, 241-42). Satir (1967, 182-83) and Rossiter and Pearce (1975, 241) have indicated that the more "serious" the discrepancy between channels, the greater the confusion and discomfort. Thus, as a fourth prediction, it may be expected that:

H_4: both strong joking and strong sarcasm should induce more disconfirming effects, i.e., confusion and discomfort, than other multi-channel messages.

Research Relevant to Message Predictions

Contrary to the belief that incongruent multi-channel messages, in general, are disconfirming, a large number of studies appear to indicate that such messages are resolvable (i.e., a single overall affective "meaning" can be selected) and, hence, do not produce immediate disconfirming (double bind) effects of confusion and discomfort. (Loeff, 1965; Shapiro, 1966; Dustin & Baldwin, 1966; Mehrabian & Ferris, 1967; Mehrabian & Wiener, 1967; Shapiro, 1968; James, 1969; Brooks, Brandt &

Wiener, 1969; Bugental, Kaswan & Love, 1970; Tabor, 1970; Argyle et al., 1970; Argyle et al., 1971; Bugental, Kaswan, Love & Fox, 1970; Haase & Tepper, 1972; Gartner, 1972; LoCastro, 1972; Vande Creek & Watkins, 1972; Bugental, 1972; Burns & Beier, 1973; Bugental, 1974; Wohlers, 1974). Despite this general conclusion, belief in the confusing and discomforting effects of incongruent multi-channel messages persists (e.g., Millar & Millar, 1976, 76-77). Furthermore, in most of the studies, the question was not fairly tested--subjects were not encouraged or given an opportunity to express confusion, and message resolution was assured by requiring subjects to select a single overall affective value. When the expression of confusion was allowed, as in Watson (1972), group ratings of incongruent messages were slightly more variable than ratings of congruent messages, which suggests that incongruent messages may be somewhat more confusing to individuals.

Support of the general proposition that incongruent messages are in general disconfirming is limited. Leathers (1976, 238-47) reported that in response to some negatively incongruent messages, recipient verbal behavior was more confused, tense, personally hostile, withdrawn, and irrelevant, and recipient nonverbal behavior was more uncertain, confused, hostile, and attentive, than in response to positively congruent messages. Unfortunately, however, except for the intuitive judgment of the experimenter, the incongruency-congruency of messages apparently was not assessed. Further, because Leathers' comparisons were between messages that apparently differed by affect as well as congruency-incongruency, differences in responses may have been the result of either or both factors. In brief, studies relevant to the

thesis that incongruent multi-channel messages, in general, create confusion and discomfort have yielded inconclusive and ambiguous results.

Empirical evidence bearing more directly on the four message predictions is scant, weak, and ambiguous. Beyond the Sieburg (1969) and Sieburg and Larson (1971) studies, some support for the incongruent symbolic cues prediction (H_1) appears in Argyle et al. (1971), in which it was claimed that, in one experiment, strong sarcasm was rated more insincere and unstable than strong congruent messages. However, strong joking was found to be more confusing than strong sarcasm, which supports the double bind prediction (H_3). In a second experiment, Argyle et al. (1971) reported that both strong joking and strong sarcasm were rated equally more confusing and insincere than strong congruent messages--a finding that is consistent with the expanded double bind and anomalous interpretation prediction (H_4). The value of the Argyle et al. experiments are diminished, however, by the fact that personalities of communicators, rather than the messages or the recipients' emotional responses, were actually evaluated. Lending some support to the message forms prediction (H_2), Argyle et al. (1970) reported that mild incongruent messages (conflicting on the superior-inferior dimension), but not strong incongruent messages, were more confusing than mild or strong congruent messages; however, again, the evaluations were actually of communicator mental health, not messages or recipient states. Some additional support for the message forms predictions comes from studies in which the intensity and frequency of incongruent messages were related to psychopathology. Beakel and Mehrabian (1969) found that messages of mothers of severely disturbed adolescents were

less intensely incongruent than messages of mothers of mildly disturbed adolescents; and Bugental, Kaswan, Love, and April (1971) reported that mothers of disturbed (in particular, overly aggressive) sons produced more mild incongruent messages than mothers of normal sons. Overall, however, the results of experimental studies relevant to the four message predictions are inconclusive and often contradictory.

CONTEXTUAL PREDICTION

For the formation of a complete double bind, Bateson et al. (1956) argued that the importance of the communicator to the recipient, the recipient's opportunity to clarify the communicator's incongruent message, and expectations regarding the appropriateness of the recipient's response (and the recipient's ability to leave the situation) are critical. These factors can be viewed as situational constraints that presumably alter the immediate double bind (disconfirming) effects of incongruent messages. For example, if the communicator is important to the recipient, then the recipient's need or desire to impress the communicator favorably should increase; to impress the communicator, the recipient must be able to discriminate correctly and choose among alternative meanings; if the recipient cannot understand the message, as is supposedly the case with incongruent messages, and cannot clarify its meaning, then the recipient probably cannot respond appropriately and impress the communicator; and feelings of discomfort and confusion (aroused by the incongruent message) should be intensified. This leads to the fifth prediction:

H_5: the confusion and discomfort (presumably) created by specific kinds of incongruent messages are greatest when (1) the

communicator is important to the recipient, (2) the recipient cannot ask for or obtain clarification of the message, and (3) the recipient must respond appropriately (and, implicitly, cannot leave the situation).

Research Relevant to Contextual Prediction

The importance of context, in general, for the interpretation of multi-channel messages has been largely ignored. In most studies, contextual variables have been implicit and not manipulated, as in "acontextual" studies of cognitive processing in which context was limited to the narrow setting of the laboratory and task (e.g., Mehrabian & Wiener, 1967; Mehrabian & Ferris, 1967; Bugental, Kaswan & Love, 1970; Watson, 1972), or explicit but held constant, as in investigations of first impression judgments of communicators (e.g., Argyle et al., 1971) or simply undefined and undescribed, as in Leathers' (1976) study in which messages were interjected by confederates at "planned intervals" in the interaction of problem-solving groups. Furthermore, the results of these studies appear to be biased by the particular (explicit or implicit) contexts in which the interpretation of multi-channel messages was embedded. Social norms prescribe contexts in which specific kinds of messages are more or less appropriate. Congruent and incongruent and/or positive and negative messages may well be appropriate in quite different situations (Sieburg & Larson, 1971; Rummel, 1975, 28, 42); hence, recipient confusion and discomfort may result from the use of some kinds of messages in particular contexts, rather than from the characteristics of the messages per se. In Argyle et al. (1970) and Argyle et al. (1971), for example, subjects were asked to react to

messages from a stranger (described as an experimenter), whom they were meeting for the first time. It seems likely that the stranger's use of joking or sarcasm may have violated norms of polite and cautious greeting and may have seemed bizarre (leading to judgments of instability, etc.). Similarly, in Leathers' (1976) study, the "planned intervals" in which messages were introduced may have been more appropriate for some messages than others.

In a few studies, dimensions related to context were manipulated and were shown to alter significantly the ratings of multi-channel messages. In studies of organismic variables, responses to multi-channel messages varied with recipient age (James, 1969; Bugental, Kaswan, Love & Fox, 1970), socioeconomic status (Brooks et al., 1969), personality traits, such as neuroticism (Argyle et al., 1970) and A and B therapist type (Johnson and Smith, 1974), and communicator sex (James, 1969; Bugental, Kaswan & Love, 1970). On the importance of the interactant relationship for message evaluations, LoCastro (1972) found that ratings of message pleasantness were higher when the communicator was liked than when disliked. In studies tangentially relevant to the influence of context on the interpretation of multi-channel messages, it has been shown that liking for the addressee, conflict and irritation between interactants, pleasantness of addressee behavior, formality of setting, relative status of interactants, presence or absence of bystanders, ability of addressee to accept direct criticism, and the intent to encourage or discourage addressee response profoundly influence the selection of messages by communicators (Mehrabian, 1970; Rummel, 1975). Assuming that a communicator's selection of messages

is strategic and is based in part upon anticipated recipient responses, these communicator studies support the view that contextual considerations strongly and consistently influence recipient reactions.

The specific double bind contextual variables of communicator importance, message clarification, and response appropriateness have not been investigated. In studies of single-channel messages (verbal-verbal incongruency) by Lachenmeyer (1969) and Smith (1972), the prohibition against recipient meta-communication about the message and the expectation of appropriate response were explicitly present in the setting, but were not manipulated; in Smith's study, communicator importance was also explicit, but was also held constant. In brief, the contention that specific contextual conditions exaggerate the discomfort and confusion presumably aroused by incongruent multi-channel messages has not been previously tested.

METHOD

In an experiment designed to explore the immediate disconfirming (double bind) effects of strong and mild incongruent messages and the impact of certain contextual constraints on disconfirming effects, 192 male undergraduate subjects evaluated videotaped examples of strong and mild sarcasm and joking and the complementary congruent forms of straightforward positive and negative remarks for confusion and discomfort, in eight contexts (24 subjects per context). The design was a "split-plot" (Kirk, 1968) or "mixed design" (Linquist, 1953) with: (1) a factorial supra-structure composed of a completely crossed set of eight cells formed by three contextual variables (communicator importance, response expectancy, and ability to clarify); (2) a primary repeated

measures substructure within each factorial cell (each group of subjects evaluated eight messages); and (3) a secondary repeated measures substructure (three scales for each message).

Contextual Variables

The contexts were formed by a 2 x 2 x 2 crossed design of (1) communicator is important/not important to message recipient, (2) recipient can/cannot ask for clarification of communicator's message, and (3) recipient is/is not expected to respond appropriately to communicator's message (and, hence, implicitly cannot/can leave the situation). The two levels of the three contextual dimensions were operationalized in a direct manner. Simple declarative statements, expressing one level of each dimension, were combined to create eight situations, in terms of which subjects were asked to respond to selected videotaped messages. The operational statements are given in Table 1. This procedure resulted in one context containing the constraints which, following Bateson et al. (1956), should enhance the disconfirming effects of incongruent messages (the communicator is very important to the recipient, the recipient is not able to ask for clarification, and he is expected to respond appropriately); one context in which none of the constraints are present (the communicator is not very important to the recipient, the recipient is able to ask for clarification, and he is not expected to respond in any particular way); and six other contexts each containing one or two of the relevant constraints. Three counterbalanced versions of each situation were prepared in order to distribute equally possible order effects.

Insert Table 1 about here

Message Variables

Eight message types were formed by a counterbalanced combination of two levels of three message dimensions: blatancy, congruency, and overall affective meaning.[1] In the development and selection of the messages, a complex screening procedure, adapted from Bugental, Kaswan, and Love (1970) and discussed in detail in Rummel (1975), was used. This procedure generated about 450 videotaped[2] messages from which were selected high quality examples of four message forms (sarcasm, joking, straightforward positive, straightforward negative), each in two degrees of blatancy (strong and mild). For mild incongruent types, messages that permitted several interpretations were selected.

In brief, the procedure included: (1) Evaluations of the separate verbal, vocal, and visual channels of messages, for positive-negative affect ("friendliness") on 13-point scales, to define the form (e.g., as sarcasm) and blatancy (e.g., as mild or strong joking) of the messages. To evaluate the verbal channel, 27 undergraduates rated 100 written expressions. From this pool, two statements with strong and consistent positive (friendly) median ratings, and two statements with strong and consistent negative (unfriendly) median ratings were selected for videotaping (See Table 2). Nine female undergraduates videotaped

Insert Table 2 about here

each positive statement in a strong and mild straightforward (congruent) and sarcastic (incongruent) manner, and each negative statement in a strong and mild straightforward and joking manner. For assessing the vocal channel, an audio tape of the messages was passed through a

Krohnhite Model 310-C bandpass filter set at 450 Hz; the filtered messages were then played to three groups of 27 undergraduates each, with each group rating the messages of three of the nine communicators. For the visual channel, three other groups of 27 undergraduates each evaluated the videotaped messages of three of the nine communicators, played without sound. (2) Ratings of the overall affective value (all channels combined) of the messages, to define affect and blatancy. Three groups of 21 undergraduates each rated the whole messages of three of the nine communicators on 7-point "friendliness" scales (See Table 2). (3) Attractiveness ratings of communicators, to minimize and control idiosyncratic differences. Before rating the whole messages, the three groups of 21 undergraduates observed their three communicators in 45-second neutral scenes and evaluated each communicator on four 7-point "attractiveness" scales. (4) Judgments of message "phoniness", to assure believability. A panel of five judges observed all messages from all communicators and identified those that seemed to be "phoney" or "unbelievable."

From the videotaped "believable" messages of four equally attractive communicators, two examples of each of the eight kinds of messages were chosen (16 in all), with each communicator contributing four messages (See Table 2). As a check on the screening procedure, two groups of 25 undergraduates each used a limited list of labels to label all 16 messages (presented in two different orders) as sarcasm, joking, positive (sincere, straightforward), negative (sincere, straightforward). As is indicated in Table 3, there was about 80% agreement on the labels assigned to the strong message types; over 60% agreement on the Mild Negative and Mild

Insert Table 3 about here

Positive types. As intended the Mild Sarcasm and Mild Joking message types were apparently much more ambiguous. Although Mild Joking was almost never identified as sarcasm, judges frequently were unable to identify the message form or called it straightforward negative. Mild Sarcasm was infrequently identified as joking, but judges frequently labelled the examples as positive, negative or don't know. This procedure clearly verified the success of the screening procedure.

The 16 selected messages were organized into several series, with one example of each type of message in each series. To assess both communicator-plus-example and serial position effects, four series of messages, varying systematically by examples and message position, were used. After the study-data were collected, multivariate tests for order and communicator-plus-example effects were executed. No statistically significant effects were found and hence responses to the two examples of each message were combined.

Measurement

Confusion was assessed by two 7-point equal-appearing interval scales: clarity of communicator's feelings toward recipient (clear to unclear) and clarity of message meaning to recipient (clear to unclear). On a third 7-point scale subjects indicated how comfortable-uncomfortable each message made them feel.[3]

Procedure

Booklets containing descriptions of a situation and scales for evaluating the comfort and clarity of videotaped messages were distributed

to males in communication and sociology classes at the State University of New York, College at Geneseo. Each subject evaluated eight practice anchor messages and two real series of eight messages in one (only) situation. Each situation was introduced with the request, "Imagine that you are talking with a woman. You have just done something, and she is about to make a comment." Subjects were instructed to memorize and internalize the details of their situation, so that they would react to the video-taped messages as if the communicators were interacting with them in that particular context.[4] After the practice messages, subjects were given a 2-minute break in which to ask questions and review their situation; then the first real series of messages was played, followed by another 2-minute break, and the second series of real messages.

Subjects were treated in groups of various sizes, with an equal number of subjects exposed to counterbalanced versions of each of the eight situations and each of the four series of messages. Assignment of a message series to a group of subjects was by lot. Assignment of a situation and particular counterbalanced version to subjects within groups was also random.

Although subjects were told that their responses to both real series of messages would be used in the study, only data from the second real series was used, since only by then had subjects fully mastered the task.

RESULTS

Two major analyses were undertaken: (1) The five hypotheses were tested by analysis of variance in an 8 x 8 split-plot design (8 message types nested in each of 8 contexts), followed where appropriate by tests of simple main effects and a posteriori comparisons among means using Tukey's HSD procedure (Kirk, 1968, 248 - 283). Each of the three dependent variables was analyzed separately. (2) To determine the influence on respondant judgments of the constituent message dimensions (blatancy, overall affective value, and congruency) and the constituent contextual dimensions (importance of the communicator to the recipient, recipient's ability to clarify messages, and expectations regarding recipient's response), the data were reorganized into a six-way, within and between design, with two levels of each dimension. Multivariate and univariate F-ratios were computed, treating the responses on the dependent measures as simultaneous dependent variables.

The alpha level for all tests of significance was set at .01 and it was further decided that a "meaningful" effect should be of at least moderate size (.25) and should account for at least four percent of the total variance accounted for. These decisions were arbitrary since previous research provided few cues about what effect sizes could be expected; but seemed reasonable in view of the desire to detect pragmatically meaningful differences among rival hypotheses.[5]

Message-Types by Context Analysis. The results of the context by message-types analyses are reported in Tables 4, 5, and 6. The basic analyses revealed statistically significant differences among the message-

types on all three dependent measures; no statistically significant context effects; and statistically significant context-by message interaction effects only on the Clarity of Feelings (F) Scale (Table 6).

Insert Tables 4, 5, and 6, here

Contextual Hypothesis. The obtained data suggest that the contextual hypothesis (H_5) should be rejected. On the Clarity of Meaning (M) Scale (Table 4) and the Comfort (C) Scale (Table 5), neither main effects for context nor context-by-message interaction effects were statistically significant. On the Clarity of Feelings (F) Scale (Table 6) a statistically significant context-by-message interaction effect was obtained and the desired effect size criterion was reached. However, the interaction effects accounted for only two percent of the total variance and the tests of simple main effects and Tukey's a posteriori comparisons among means indicated that the obtained differences did not support the contextual hypothesis. Statistically significant context effects were obtained only for the Strong Joking and Mild Sarcasm messages; and for both of these message types, the predicted double-bind context apparently did not exert a negative influence on respondants' judgments of the Clarity of Feelings expressed in the messages. It seems safe to conclude that context did not have a meaningful influence on subjects' responses to the multi-channel messages (H_5).

Message Hypotheses. On all three dependent variables, statistically significant message effects were obtained. However, the a posteriori comparisons among means (Tables 4, 5, and 6) did not provide unequivocal

support for any of the four message hypotheses. If disconfirming effects are defined in terms of discomfort, H_1 is supported: Strong Sarcasm was rated as significantly less comfortable (F-Scale) than the other incongruent or congruent message types (Table 5). If disconfirming effects are defined in terms of confusion (M and C Scales), H_2 is supported: Mild Sarcasm and Mild Joking were rated as significantly less clear (more confusing) than the other incongruent or congruent message types. When disconfirming effects are defined in terms of <u>both</u> discomfort and confusion, none of the hypotheses is clearly supported, but the results of this analysis suggest that Mild Sarcasm and Mild Joking (H_2) are more likely to produce both types of disconfirming effects. The mean scores reported in Table 7 indicate that Mild Joking and Mild Sarcasm were rated as moderately confusing and uncomfortable (mean scores in the 3.0 range on the 7-point scales). The responses to Strong Sarcasm (H_1)

Insert Table 7 here

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were essentially the same as responses to straightforward Strong Negative messages; both were rated as very clear (mean scores approach 6.0) and very uncomfortable (mean scores around 2.0). Strong Joking (H_3) was rated as moderately clear and comfortable (mean scores in the 4.0 range). Responses to Strong Sarcasm and Strong Joking differed considerable, suggesting that the assumption implicit in H_4 that subjects would respond similarly to these message types is untenable. In brief, Hypotheses 3 and 4 were rejected; some support was obtained for both Hypotheses 1 and 2.

<u>Analysis of the Constituent Dimensions of Messages and Context</u>. The six-way analysis of constituent message and context variables tended to support the preceding analysis. Means and standard deviations for the three-

way message interactions are reported in Table 7. The F-ratios for the significant effects are reported in Table 8.[6]

Insert Table 8 here

The results of this analysis suggest that confusion, as measured by both the M- and F-Scales, is primarily a function of message blatancy (strength), with congruency and message affect exerting weaker influences. Mild incongruent messages (Mild Joking and Mild Sarcasm) were least clear. Strong Joking, Mild Positive, and Mild Negative messages were more clear than the mild incongruent messages, less clear than Strong Positive, Strong Negative, and Strong Sarcasm. On the other hand, responses on the Comfort Scale appear to be primarily a function of message global affective value, with blatancy and congruency exerting weaker influences. The four messages with overall positive affective values (straightforward Strong and Mild Positive, and Strong and Mild Joking) were evaluated as more comfortable than the messages with overall negative affective values (Strong and Mild Sarcasm, Strong and Mild Negative), regardless of form.

Although several statistically significant interactions were obtained between contextual and message variables, these interactions accounted for a very small part of the variance and were virtually uninterpretable (see Table 8).

DISCUSSION

The use of a single sex (male) and culturally restricted sample and only female communicators limits the generalizability of the results of

this study. Since, as already mentioned, recipient sex and cultural background and communicator sex have all been found to influence the interpretation of multi-channel messages, the need to extend the investigation of the disconfirming/double-binding effects of such messages to other classes of subjects is evident.

Nevertheless, the results of this study suggest that several widely held assumptions about multi-channel messages should be reevaluated:

(1) The popular generalization that disconfirming or double-binding effects are more likely to result from all incongruent multi-channel messages than from congruent messages was not supported. At the same time, the counter position, that all incongruent messages are easily resolvable, was also not confirmed. As is shown in Table 7, some congruent message types (Mild and Strong straightforward Negative remarks) and some incongruent message types (Mild and Strong Sarcasm) appear to be particularly discomforting; other congruent message types (Mild Positive and Mild Negative) appear to be equally or more confusing than some incongruent types (Strong Sarcasm and Strong Joking).

(2) Previously, the disconfirming/double-bind effects of confusion and discomfort have been assumed to occur and vary together and a causal relationship between the two effects (confusion → discomfort) has been tacitly assumed. For multi-channel messages of the types studied here, the data support neither assumption. Confusion and discomfort were found to be relatively independent effects (see Tables 4, 5, 6). Confusion appears to be primarily a function of message blatancy and comfort primarily a function of overall message affect. In general,

mild incongruent messages were most confusing and messages with an overall negative valence were most discomforting.

The apparent independence of confusion and discomfort suggests that the presumed precursory relationship(s) between immediate perceptual and interpretive effects and psychologically disconfirming experiences must be reexamined. If disconfirmation is defined in terms of recipient discomfort (ignoring recipient confusion) strong negative incongruent and congruent messages (Strong Sarcasm and straightforward Strong Negative) are more disconfirming than other message types. If disconfirmation is defined in terms of confusion only, then mild incongruent messages are more disconfirming than other message types. If disconfirmation is defined in terms of both confusion and discomfort, then, overall, mild incongruent messages are more disconfirming than other message types. The independence of immediate effects suggests the possibilities that repeated exposure to mild incongruent messages may lead to different disorders than repeated exposure to strong straightforward negative or sarcastic remarks, or that several different types of discomforting and confusing messages may interact in the development of psychopathologies.

(3) The results of this study also do not support the widespread belief(expressed in three of the four message predictions) that the greater the discrepancy between channels, the greater the resulting discomfort and/or confusion. The results clearly indicate that channel discrepancy (congruency-incongruency) is a less important determinant of clarity than is the affective intensity of the channels (blatancy) and a less important determinant of comfort than is overall affective value.

The finding that blatancy is positively related to clarity is consistent with Rummel's "Message Forms" conceptualization and implies the inadequacy of models of multi-channel message processing that do not include blatancy (e.g., Mehrabian & Ferris, 1967).

(4) Although most theories of message interpretation, as well as the double bind theory of schizophrenia, emphasize the importance of context in determining message meaning, contextual variables apparently played an insignificant role in this study. The unexpected failure to obtain significant contextual effects may have resulted from several factors: (a) Subjects may have been insufficiently involved in the imaginary situations. However, in debriefing, subjects reported being involved in the situations and in a similarly designed study run simultaneously, strong contextual effects were obtained (Rummel, 1975). (b) Contextual factors may become influential only under conditions of repeated exposure to incongruent messages. Only short-term effects were studied here. (c) Contextual factors may be important only when the incongruent messages are paradoxical. Bateson et al. (1956) implied that logical paradoxes (double binds) are disconfirming, and Watzlawick et al. (1967) indicated that pragmatic paradoxes involve the interaction of contextual constraints with incongruent messages. In this study, messages were not accompanied by punishments or threats of punishments or otherwise made paradoxical, and the interaction of context and paradoxical messages remains to be studied.

The results of this study speak forcefully for continued study of the relationship(s) between incongruent messages and disconfirmation, and for a thorough reexamination of current conceptualizations of disconfirmation.

Notes

(p. 17) 1. Although blatancy (strength), affect, form (congruency-incongruency), and confirmation-disconfirmation are all continuous variables, for purposes of discussion and investigation they are treated dichotomously.

(p. 17) 2. Videotapes were purchased with grant money awarded to the first author by the Graduate Resource Access Development Project (Graduate Student Association, SUNY at Buffalo).

(p. 19) 3. It is difficult to determine statistically the validity and reliability of single-item instruments. In this instance, however, the instruments were designed to be simple "reports" of the respondants' feelings at a particular moment in time, not measures of complex hypothetical constructs, and thus should have high face validity. Moreover, the subjects were trained in the use of the scales and had practice in their use. It is doubtful that multi-item instruments would have provided more valid measurement. Furthermore, two additional considerations made multiple-response scales both highly impractical and inappropriate: (1) The "rapid fading" nature of the stimulus materials--i.e., the number of questions that could be answered before Ss lost visual and auditory memory of the messages is naturally limited; and (2) retroactive interference with subject judgments--i.e., as is well known, a drastic decrease in the scope and accuracy of recall occurs very quickly once Ss begin to make

judgments about stimuli stored in short-term memory. In short, answering more than three questions per message would very likely have led to considerable distortion of the data!

Each of the scales was used repeatedly by each of the respondants. The situation can be conceptualized as a judging or rating task in which each of the respondants (judges) rated eight messages on three characteristics, thus providing the opportunity for obtaining intercorrelations of ratings of the eight messages on each of the three scales from all possible pairs of raters. Ebel's (1951) procedure for estimating the reliability of a single rater and the reliability for the mean rating from 192 raters therefore provides estimates of the reliability of the scales:

	F-Scale	M-Scale	C-Scale
Reliability of individual raters	.36	.36	.55
Reliability of mean ratings	.99	.99	.99

The relatively low reliability coefficients for individual raters are not surprising, since the procedure used compares ratings of eight different messages obtained in eight different contexts.

(p. 20) 4. Since this study focused on the simple perception and interpretation of messages, the appropriateness of the messages to the context was not a significant issue.

(p. 21) 5. In the 8 x 8 design, the power of the F-ratio to detect an Effect Size of .25 would be .45 for between-subjects and

interaction effects and .99 for within-subjects tests. In the 2 x 2 x 2 design, power would range from .99 for within-subjects tests, .81 for between-subjects tests, .44 for between-subjects two-way interactions, to .18 for tests of interactions involving all three between-subjects variables.

(p. 23) 6. Since this analysis involved 63 multivariate and 189 univariate tests of significance, the complete analysis is not reported here. A copy of the complete analysis may be obtained from the authors.

REFERENCES

ARGYLE, M., ALKEMA, F.,& GILMOUR, R. The communication of friendly and hostile attitudes by verbal and non-verbal signals. European Journal of Social Psychology, 1971, 1, 385-402.

ARGYLE, M., SALTER, V., NICHOLSON, H., WILLIAMS, M., & BURGESS, P. The communication of inferior and superior attitudes by verbal and non-verbal signals. British Journal of Social and Clinical Psychology, 1970, 9, 222-231.

BATESON, G. Information and codification: A philosophical approach. In J. Ruesch & G. Bateson, Communication, the social matrix of psychiatry. New York: W. W. Norton, 1951, 168-211.

BATESON, G. The logical categories of learning and communication. In G. Bateson, Steps to an ecology of mind. New York: Ballantine Books, 1972, 279-308.

BATESON, G., JACKSON, D.D., HALEY, J., & WEAKLAND, J.H. Toward a theory of schizophrenia. Behavioral Sciences, 1956, 1, 251-264.

BEAKEL, N.G., & MEHRABIAN, A. Inconsistent communications and psychopathology. Journal of Abnormal Psychology, 1969, 74, 126-130.

BROOKS, R., BRANDT, L., & WIENER, M. Differential response to two communication channels: Socioeconomic class differences in response to verbal reinforcers communicated with and without tonal inflection. Child Development, 1969, 40, 453-470.

BUBER, M. I and thou. New York: Charles Schribner's Sons, 1958.

BUGENTAL, D.E. Inconsistency between verbal and nonverbal components in parental communication patterns: Its interpretation and effects. In P. Zimbardo (Chair), Consistency as a process and a problem in psychology. Symposium presented at the meeting of the International Congress of Psychology, Tokyo, 1972.

BUGENTAL, D.E. Interpretation of naturally occurring discrepancies between words and intonations: Modes of inconsistency resolution. Journal of Personality and Social Psychology, 1974, 30, 125-133.

BUGENTAL, D.E., KASWAN, J., & LOVE, L. Perceptions of contradictory meanings conveyed by verbal and nonverbal channels. Journal of Personality and Social Psychology, 1970, 16, 647-655.

BUGENTAL, D.E., KASWAN, J., LOVE, L., & APRIL, C. Verbal-nonverbal conflict in parental messages to normal and disturbed children. Journal of Abnormal Psychology, 1971, 77, 6-10.

BUGENTAL, D.E., KASWAN, J., LOVE, L., & FOX, M. Child versus adult perceptions of evaluative messages in verbal, vocal, and visual channels. Developmental Psychology, 1970, 2, 367-375.

BURKE, K. Permanence and change, rev. ed. Indianapolis: Bobbs-Merrill, 1965.

BURNS, K., & BEIER, E. Significance of vocal and visual channels in the decoding of emotional meaning. Journal of Communication, 1973, 23, 118-130.

CHILD, I.L. Humanistic psychology and the research tradition: Their several virtues. New York: John Wiley and Sons, 1973.

DUNCAN, H.D. Symbols in society. London: Oxford University Press, 1968.

DUSTIN, D.S., & BALDWIN, P.M. Redundancy in impression formation. Journal of Personality and Social Psychology, 1966, 3, 500-506.

ERICKSON, R.C., & HYERSTAY, B.J. The dying patient and the double-bind hypothesis. Omega, 1974, 5, 287-298.

FINN, J.D. A general model for multivariate analysis. New York: Holt, Rinehart, and Winston, 1974.

GARTNER, J.E. A study of verbal, vocal, and visual communication. Unpublished doctoral dissertation, Department of Psychology, Columbia University, 1972.

GIFFIN, K. Social alienation by communication denial. Quarterly Journal of Speech, 1970, 56, 347-357.

GINSBERG, M. Action and communication. Human Context, 1974, 6, 81-102.

GOLDBERG, A.A., & LARSON, C.E. Group communication. Englewood Cliffs, N.J.: Prentice-Hall, 1975.

GORDON, C., & GERGEN, K.J. (Eds.). The self in social interaction, vol. 1: Classic and contemporary perspectives. New York: John Wiley and Sons, 1968.

HAASE, R.F., & TEPPER, D.T., JR. Nonverbal components of empathic communication. Journal of Counseling Psychology, 1972, 19, 417-424.

HULETT, J.E., JR. A symbolic interactionist model of human communication. Audio Visual Communication Review, 1966, 14, 5-33.

JAMES, P. Children's interpretations of multi-channel communications conveying verbal and nonverbal meanings. Unpublished doctoral dissertation, Department of Psychology, Ohio State University, 1969.

JOHNSON, W.R., & SMITH, E.W. Responsivity to incongruent verbal and nonverbal communications and A-B therapist type. Perceptual and Motor Skills, 1974, 38, 1066.

KELLEY, R.L., OSBORNE, W.J., & HENDRICK, C. Role-taking and role-playing in human communication. Human Communication Research, 1974, 1, 62-74.

KIRK, R.E. Experimental design: Procedures for the behavioral sciences. Belmont, Calif.: Wadsworth (Brooks/Cole), 1968.

LACHENMEYER, C.W. The double-bind phenomena: A conceptual analysis and empirical proposal. Unpublished doctoral dissertation, Department of Sociology, University of North Carolina at Chapel Hill, 1969.

LAING, R.D. The self and others. New York: Pantheon Books, 1961.

LAMPEL, A.K., & ANDERSON, N.H. Combining visual and verbal information in an impression-formation task. Journal of Personality and Social Psychology, 1968, 9, 1-6.

LA ROSSA, R. Interpreting hierarchical message structure. Journal of Communication, 1974, 24, 61-68.

LEATHERS, D.G. Nonverbal communication systems. Boston: Allyn and Bacon, 1976.

LINDQUIST, E.F. Design and analysis of experiments in psychology and education. Boston: Houghton Mifflin, 1953.

LIEM, J.H. Communication in normal and schizophrenic families: Parent and child effects. Unpublished doctoral dissertation, Department of Psychology, Boston University, 1973.

LO CASTRO, J.S. Judgment of emotional communication in the facial-vocal-verbal channels. Unpublished doctoral dissertation, Department of Psychology, University of Maryland, 1972.

LOEFF, R.G. Differential discrimination of conflicting emotional messages by normal, delinquent, and schizophrenic adolescents. Unpublished doctoral dissertation, Department of Psychology, Indiana University, 1965.

MEAD, G.H. The genesis of self and social control. International Journal of Ethics, 1925, 35, 251-273.

MEHRABIAN, A. When are feelings communicated inconsistently? Journal of Experimental Research in Personality, 1970, 4, 198-212.

MEHRABIAN, A., & FERRIS, S.R. Inference of attitudes from nonverbal communication in two channels. Journal of Consulting Psychology, 1967, 3, 248-252.

MEHRABIAN, A., & WIENER, M. Decoding of inconsistent communications. Journal of Personality and Social Psychology, 1967, 6, 109-114.

MELTZER, B. Mead's social psychology. In J.G. Manis & B.N. Meltzer (Eds.), Symbolic interaction, a reader in social psychology. Boston: Allyn and Bacon, 1967, 5-25.

MILLAR, D.P., & MILLAR, F.E. Messages and myths. New York: Alfred Publishing Co., 1976.

PFUETZE, P.F. Self, society, existence. New York: Harper and Row, 1961.

ROGERS, C. The necessary and sufficient conditions for therapeutic personality change. Journal of Consulting Psychology, 1957, 22, 95-103.

ROSSITER, C.M., JR., & PEARCE, W.B. Communicating personally. Indianapolis: Bobbs-Merrill, 1975.

RUESCH, J. Communication and mental illness. In J. Ruesch and G. Bateson, Communication, the social matrix of psychiatry. New York: W. W. Norton, 1951, 50-93.

RUESCH, J. Synopsis of the theory of human communication. Psychiatry, 1953, 16, 215-243.

RUESCH, J., & BATESON, G. Communication, the social matrix of psychiatry. New York: W.W. Norton, 1951.

RUMMEL, L. The expressive, control, and safety value of sarcasm and other message forms. Unpublished doctoral dissertation, Department of Speech Communication, State University of New York at Buffalo, 1975.

SATIR, V. Conjoint family therapy, rev. ed. Palo Alto, Calif.: Science and Behavior Books, 1967.

SCHUHAM, A.I. The double-bind hypothesis a decade later. Psychological Bulletin, 1967, 68, 409-416.

SHAPIRO, J. Agreement between channels of communication in interviews. Journal of Consulting Psychology, 1966, 30, 535-538.

SHAPIRO, J. Responsivity to facial and linguistic cues. Journal of Communication, 1968, 18, 11-17.

SIEBURG, E. Dysfunctional communication and interpersonal responsiveness in small groups. Unpublished doctoral dissertation, Department of Speech Communication, University of Denver, 1969.

SIEBURG, E. Interpersonal confirmation: Conceptualization and measurement. Paper presented at the meeting of the International Communication Association, Montreal, April 1973.

SIEBURG, E., & LARSON, C. Dimensions of interpersonal response. Paper presented at the meeting of the International Communication Association, Phoenix, Arixona, April 1971.

SLUZKI, C. E., BEAVIN, J., TARNOPOLSKY, A., & VERON, E. Transactional disqualification. Archives of General Psychiatry, 1967, No. 4, 494-504.

SMITH, E.K. The effect of double-bind communications upon the state anxiety of normals. Unpublished doctoral dissertation, Department of Psychology, University of New Mexico, 1972.

SULLIVAN, H.S. The interpersonal theory of psychiatry. New York: W.W. Norton, 1953.

TABER, E.S. Decoding of consistent and inconsistent attitudes in communication. Unpublished doctoral dissertation, Department of Psychology, Illinois Institute of Technology, 1970.

VANDE CREEK, L., & WATKINS, J. Responses to incongruent verbal and nonverbal emotional cues. Journal of Communication, 1972, 22, 311-316.

WATSON, S.G. Judgment of emotion from facial and contextual cue combinations. Journal of Personality and Social Psychology, 1972, 24, 334-342.

WATZLAWICK, P. How real is real? New York: Random House (Vintage Books), 1976.

WATZLAWICK, P., BEAVIN, J., & JACKSON, D.D. Pragmatics of human communication. New York: W.W. Norton, 1967.

WENDER, P.H. Communicative unclarity: Some comments on the rhetoric of confusion. Psychiatry, 1967, 30, 332-349.

WOHLERS, J.H., JR. Multi-"channel" communication of an evaluative message. Unpublished doctoral dissertation, University of Tennessee, 1974.

WOODWARD, J.A., & GOLDSTEIN, M.J. Communication deviance in the families of schizophrenics: A comment on the misuse of analysis of covariance. Science, 1977, 197 (4308): 1096-1097.

TABLE 1

Statements Operationalizing Contextual Variables

Variable	Statement
Communicator Importance	She is very important to you (you want to impress her).
	She is not very important to you (you don't really care about impressing her).
Message Clarification	You will be able to ask her what she meant by her remark.
	You won't be able to ask her what she meant by her remark.
Response Appropriateness	After her remark, you'll be expected to respond appropriately.
	After her remark, you won't be expected to respond in any particular way.

TABLE 2

Median Ratings of Channels and Whole Messages for Selected Messages

Example	Message Type	Verbal[a]	Vocal[a]	Visual[a]	Whole Message[b]	Communicator Number
	Strong Sarcasm					
1	"Brilliant. That's really clever."	12	3	4	1	7
2	"Fantastic.That's terrific."	12	4	3	1	1
	Mild Sarcasm					
3	"Brilliant. That's really clever."	12	8	7	3	1
4	"Fantastic. That's terrific."	12	7	6	3	8
	Strong Negative					
5	"That's disgusting."	3	1	2	2	7
6	"That was incredibly stupid."	2	2	2	1	1
	Mild Negative					
7	"That's disgusting."	3	4	5	3	4
8	"That was incredibly stupid."	2	4	5	3	8
	Strong Joking					
9	"That's disgusting."	3	10	11	6	1
10	"That was incredibly stupid."	2	10	11	6	4
	Mild Joking					
11	"That's disgusting."	3	6	8	5	8
12	"That was incredibly stupid."	2	7	8	5	7
	Strong Positive					
13	"Brilliant. That's really clever."	12	11	11	6	4
14	"Fantastic. That's terrific."	12	13	12	7	7
	Mild Positive					
15	"Brilliant. That's really clever."	12	9	8	5	8
16	"Fantastic. That's terrific."	12	8	9	5	4

Note. All channel and whole message interquartile (Q) values were ≤ 2.

[a] 13-point scale (13 = friendly; 1 = unfriendly). n raters per channel = 27.

[b] 7-point scale (7 = friendly; 1 = unfriendly). n raters = 21.

TABLE 3

Distribution of Labels Applied to Selected Messages

Message Example	Message Type: Blatancy	Message Type: Form	POSITIVE (sincere, straightforward)	NEGATIVE (sincere, straightforward)	SARCASM	JOKING (kidding, teasing)	"DON'T KNOW/CAN'T TELL" & "OTHER"
1	Strong	Sarcasm	.02[a]	.16	.78	---	.04
2	Strong	Sarcasm	---	.18	.80	---	.02
3	Mild	Sarcasm	.16	.20	.32	.04	.28
4	Mild	Sarcasm	.18	.26	.30	.02	.24
5	Strong	Negative	.04	.84	.10	---	.02
6	Strong	Negative	.04	.86	.06	.02	.02
7	Mild	Negative	.04	.74	.02	.18	.02
8	Mild	Negative	.02	.78	.02	.12	.06
9	Strong	Joking	.06	---	.02	.88	.04
10	Strong	Joking	.06	.06	.06	.78	.04
11	Mild	Joking	.12	.30	.02	.38	.18
12	Mild	Joking	.08	.28	---	.38	.26
13	Strong	Positive	.78	---	.12	.06	.04
14	Strong	Positive	.88	---	---	.08	.04
15	Mild	Positive	.64	.08	.20	.02	.06
16	Mild	Positive	.62	.04	.24	.02	.08

[a]Proportion of subjects selecting this label. N = 50.

TABLE 4

Context by Message Type ANOVA, for Clarity of Meanings (M Scale)

Source of Variance	SS	df	MS	F-Ratio	Prob.	Effect Size*	ω^2
Between Subjects	653.74	191	3.423				
Context (A)	29.62	7	4.231	1.247		.21	.00
Subj. w. groups	624.12	184	3.392				
Within Subjects	4186.50	1344	3.115				
Messages (B)	1508.71	7	215.530	108.522	<.01	.70	.31
A x B	119.75	49	2.444	1.231		.22	.00
B by Subj. w. groups	2558.04	1288	1.986				
Total	4840.24	1535	3.153				

*Standardized Effect Size (Cohen, 1968, 8 - 14)

Tukey a Posteriori Comparisons**

Mild Sarcasm	Mild Joking	Strong Joking	Mild Positive	Mild Negative	Strong Sarcasm	Strong Positive	Strong Negative
(3.51)	(3.58)	(4.47)	(4.71)	(5.25)	(5.90)	(5.94)	(6.24)

**Underlined mean scores do not differ significantly from each other at the .01 level of significance. Thus MJ is not significantly different from MS, but both are significantly different from the other message types.

TABLE 5

Context by Message Type ANOVA, for Comfort (C Scale)

Source of Variance	SS	df	MS	F-Ratio	Prob.	Effect Size*	ω^2
Between Subjects	565.09	191	2.959				
Context (A)	23.01	7	3.286	1.115		.20	.00
Subj. w. groups	542.09	184	2.946				
Within Subjects	4485.62	1344	3.338				
Messages (B)	2474.974	7	353.568	238.518	$<.01$	1.04	.49
A x B	101.365	49	2.069	1.396		.24	.00
B by Subj. w. groups	1909.287	1288	1.482				
Total	5050.718	1535	3.290				

*Standardized Effect Size (Cohen, 1968, 8 - 14)

Tukey a Posteriori Comparisons**

Strong Sarcasm	Strong Negative	Mild Negative	Mild Sarcasm	Mild Joking	Strong Joking	Mild Positive	Strong Positive
(2.03)	(2.20)	(2.79)	(2.99)	(3.44)	(4.42)	(4.43)	(6.07)

**Underlined mean scores do not differ significantly from each other at the .01 level of significance. Thus MS is not significantly different from MN, but is significantly different from SS and SN.

TABLE 6

Context by Message Type ANOVA for Clarity of Feelings (F-Scale)

Source of Variance	SS	df	MS	F-Ratio	Prob.	Effect Size*	ω^2
Between Subjects	661.10	191	3.461				
Context (A)	17.64	7	2.520	.721		.16	.00
A at b_1(SP)	7.65	7	1.092	1.154		.14	.00
A at b_2(MP)	16.00	7	2.286	.871		.21	.00
A at b_3(SN)	12.08	7	1.725	1.309		.18	.00
A at b_4(MN)	18.15	7	2.592	3.311	<.01	.22	.00
A at b_5(SJ)	45.90	7	6.556	1.509		.35	.00
A at b_6(MJ)	20.91	7	2.987	.691		.23	.00
A at b_7(SS)	9.58	7	1.369	3.138	<.01	.16	.00
A at b_8(MS)	43.50	7	6.214			.34	.00
Subjects w. Cells	643.46	184	3.497				
Within Cells	2914.62	1472	1.980				
Within Subjects	3825.38	1344	2.846				
Messages (B)	1398.10	7	199.728	113.268	<.01	.72	.31
B at a_1	167.17	7	23.881	13.543	<.01	.70	.03
B at a_2	200.00	7	28.571	16.203	<.01	.77	.04
B at a_3	132.98	7	18.997	10.773	<.01	.63	.03
B at a_4	109.90	7	15.699	8.903	<.01	.57	.02
B at a_5	226.74	7	32.392	18.370	<.01	.82	.05
B at a_6	286.70	7	40.958	23.227	<.01	.92	.06
B at a_7	233.91	7	33.416	18.951	<.01	.83	.05
B at a_8	196.81	7	28.116	15.945	<.01	.76	.04
A x B	156.12	49	3.186	1.807	<.01	.27	.02
B by Subj. w. Cells	2271.16	1288	1.763				
Total	4486.48	1535	2.923				

*Standardized Effect Size (Cohen, 1968, 8 - 14)

Tukey a Posteriori Comparisons**

Mild Joking	Mild Sarcasm	Mild Positive	Strong Joking	Mild Negative	Strong Negative	Strong Sarcasm	Strong Positive
(3.48)	(3.48)	(4.38)	(4.41)	(5.36)	(5.68)	(5.81)	(5.97)

**Underlined mean scores do not differ significantly from each other at the .01 level of significance. Thus, SP is not significantly different from SN and SS; but is significantly larger than MN, SJ, MP, MS, and MJ.

TABLE 7

Means and Standard Deviations for Each Message Type, on Each Scale, by the Three Message Dimensions

Message Dimensions	Congruity				Incongruity			
	Positive		Negative		Positive		Negative	
	Strong	Mild	Strong	Mild	Strong	Mild	Strong	Mild
Message Types	(SP)	(MP)	(SN)	(MN)	(SJ)	(MJ)	(SS)	(MS)
	Means							
F	5.97	4.38	5.68	5.36	4.41	3.48	5.81	3.48
M	5.94	4.71	6.24	5.25	4.47	3.58	5.90	3.51
C	6.07	4.43	2.20	2.79	4.42	3.44	2.03	2.99
	Standard Deviations							
F	1.33	1.43	1.41	1.31	1.49	1.42	1.43	1.43
M	1.30	1.50	1.17	1.40	1.75	1.55	1.47	1.55
C	1.13	1.40	1.39	1.23	1.51	1.20	1.30	1.12

Note: SP = Strong Positive; MP = Mild Positive;
SN = Strong Negative; MN = Mild Negative;
SJ = Strong Joking; MJ = Mild Joking;
SS = Strong Sarcasm; MS = Mild Sarcasm

TABLE 8

Summary of Significant Multivariate and Univariate F-Ratios from Six-Way ANOVA, with Three Context and Three Message Dimensions, for Each of the Three Dependent Measures

Source of Variance	F-Scale				M-Scale				C-Scale				Mult F	P. <
	Univ F	P. <	ES*	ω^2	Univ F	P. <	ES*	ω^2	Univ F	P. <	ES*	ω^2		
Main Effects														
Strength	384.93	.0001	.50	.14	370.66	.0001	.49	.15	20.16	.0001	.11	.01	157.90	.0001
Affect	49.05	.0001	.18	.02	46.29	.0001	.17	.02	857.82	.0001	.74	.33	300.95	.0001
Congruency	226.62	.0001	.38	.09	257.76	.0001	.41	.11	124.93	.0001	.29	.03	121.06	.0001
2-Way Interactions														
Strength by Affect	.25	.6201	.02	.00	17.48	.0001	.15	.00	336.60	.0001	.66	.08	129.33	.0001
Strength by Congruency	28.43	.0001	.19	.01	15.68	.0002	.14	.00	17.36	.0001	.15	.01	18.18	.0001
Affect by Congruency	7.16	.0082	.10	.00	3.86	.0510	.07	.00	86.50	.0001	.34	.03	28.56	.0001
Importance by Affect	3.82	.0523	.07	.00	.15	.6993	.01	.00	6.28	.0131	.09	.00	4.04	.0083
Importance by Cong.	11.15	.0011	.12	.00	.80	.3715	.03	.00	2.80	.0960	.06	.00	4.62	.0039
3-Way Interactions														
Strength by Affect by Congruency	95.17	.0001	.50	.04	38.54	.0001	.32	.02	1.84	.1767	.07	.00	31.87	.0001
Strength by Congruency by Question	4.39	.0376	.11	.00	.73	.3941	.04	.00	.02	.8848	.01	.00	3.94	.0094

*Standardized Effect Size (Cohen, 1969, 8 - 14)